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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/613,589

07/02/2003

Sakae Suda

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EXAMINER

SHOSHO, CALLIE E

ART UNIT

PAPER NUMBER

1714

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/613,589

Applicant(s)

SUDA ET AL.

Examiner

Callie E. Shosho

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5 and 7-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5 and 7-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/11/06 has been entered.
2. It is noted that applicants' after-final amendment filed 11/10/06 which was previously not entered (see Advisory Action mailed 11/24/06) has now been entered. The following office action is based on this now entered amendment.

It is noted that the 35 USC 102 rejection set forth in paragraph 12 below is identical to that set forth in paragraph 4 of the office action mailed 8/11/06 with the exception that instead of U.S. 2003/0236343, the corresponding patent, i.e. U.S. 7,157,539, which has now issued, has been cited.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection

is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-3, 5, and 7-11 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 and 12 of copending Application No. 10/958,408. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following explanation.

Copending 10/958,408 discloses ink comprising colorant, i.e. functional substance, amphiphilic block polymer, and solvent wherein the colorant is enclosed in the amphiphilic block polymer and dispersed in the solvent. The amphiphilic block polymer comprises repeating units of the formula $-(CH_2-CH-)$ where R_1 is $(CH(R^2)-CH(R^3)-O)-R^4$ where R^4 is phenyl (Ph) or $Ph-COOR^5$, R^2 and R^3 are each hydrogen or methyl group, and R^5 is hydrogen or alkyl group. There is also disclosed an image forming method. Given that the block polymer is amphiphilic, it is clear that the polymer would inherently possess hydrophilic segment and hydrophobic segment. Although there is no explicit disclosure above repeating unit is in the hydrophobic block segment of the polymer as required in the present claims, on the one hand, however, given that copending 10/958,408 disclose monomer identical to that presently claimed and block polymer comprising hydrophobic block and hydrophilic block as presently claimed, it is clear that the monomer would inherently also be part of the hydrophobic segment of the polymer as presently claimed. On the other hand, given that copending 10/958,408 disclose monomer identical to that presently claimed, which includes those that are hydrophobic, it is clear that such monomer would inherently be incorporated into the hydrophobic block segment of the polymer.

The difference between copending 10/958,408 and the present claimed invention is the requirement in the claims of (a) specific solvent and (b) toner.

With respect to difference (a), while copending 10/958,408 discloses the use of solvent, there is no explicit disclosure that the solvent is water.

Applicants' attention is drawn to MPEP 804 where it is disclosed that "the specification can always be used as a dictionary to learn the meaning of a term in a patent claim." *In re Boylan*, 392 F.2d 1017, 157 USPQ 370 (CCPA 1968). Further, those portions of the specification

which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent. (underlining added by examiner for emphasis) *In re Vogel*, 422 F.2d 438, 164 USPQ 619, 622 (CCPA 1970).

Consistent with the above underlined portion of the MPEP citation, attention is drawn to page 22, lines 16-19 of copending 10/958,408 which discloses that the solvent is in fact water or aqueous solvent.

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use water as the solvent in copending 10/958,408 and thereby arrive at the present invention from the copending one.

With respect to difference (b), while copending 10/958,408 discloses composition as presently claimed, there is no disclosure of that the composition is a toner composition as required in present claim 8.

However, while there is no disclosure that the composition is a toner composition as presently claimed, applicants attention is drawn to MPEP 2111.02 which states that "if the body of a claim fully and intrinsically sets forth all the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention's limitations, then the preamble is not considered a limitation and is of no significance to claim construction". Further, MPEP 2111.02 states that statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the purpose or intended use results in a structural difference between the claimed invention and the prior art. Only if such structural

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difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

It is the examiner's position that the preamble does not state any distinct definition of any of the claimed invention's limitations and further that the purpose or intended use, i.e. toner, recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art invention and further that the prior art structure which is a composition identical to that set forth in the present claims is capable of performing the recited purpose or intended use. Thus, one of ordinary skill in the art would arrive at the claimed invention from the copending one.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

5. Claims 1-3, 5, and 7-11 are directed to an invention not patentably distinct from claims 1-4 and 12 of commonly assigned 10/958,408. Specifically, although the conflicting claims are not identical, they are not patentably distinct for the reasons set forth in paragraph 4 above.

6. The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300). Commonly assigned 10/958,408, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the

assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

7. Claims 1-3, 5, and 7-11 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, and 12 of copending Application No. 10/554,918. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following explanation.

Copending 10/554,918 discloses ink comprising coloring agent, i.e. functional substance, solvent, and dispersing agent that is block copolymer of polyvinyl ether structure having hydrophilic segment and hydrophobic segment. It is disclosed that the coloring agent is included in the block copolymer. Given that the block copolymer comprises hydrophilic segment and hydrophobic segment, it is clear that the block copolymer is amphipathic. There is also disclosed ink-applying process for applying ink to recording medium.

The difference between copending 10/554,918 and the present claimed invention is the requirement in the claims of (a) specific polyvinyl ether, (b) specific solvent, and (c) toner.

With respect to difference (a), applicants' attention is drawn to MPEP 804 where it is disclosed that "the specification can always be used as a dictionary to learn the meaning of a

term in a patent claim.” *In re Boylan*, 392 F.2d 1017, 157 USPQ 370 (CCPA 1968). Further, those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent. (underlining added by examiner for emphasis) *In re Vogel*, 422 F.2d 438, 164 USPQ 619,622 (CCPA 1970).

Consistent with the above underlined portion of the MPEP citation, attention is drawn to page 6, line 4-page 7, line 20 of copending 10/554,918 which discloses that the polyvinyl ether is obtained from monomer unit of the formula $-(CH_2-CH-)$ where R_1 is $(CH(R^2)-CH(R^3)-O)-R^4$ where R^4 is phenyl (Ph) and R^2 and R^3 are each hydrogen or methyl group, the last formula on page 10 which discloses that the block copolymer further contains a residue of carboxylic acid, i.e. $-COOH$, and to page 5, lines 21-24 which discloses that the motivation for using block copolymer obtained from such polyvinyl ether is to produce ink excellent in image fastness, coloring ability, dispersion stability, and storage stability.

Although there is no explicit disclosure above monomer is in the hydrophobic block segment of the polymer as required in the present claims, on the one hand, however, given that copending 10/554,918 disclose monomer identical to that presently claimed and block polymer comprising hydrophobic block and hydrophilic block as presently claimed, it is clear that the monomer would inherently also be part of the hydrophobic segment of the polymer as presently claimed. On the other hand, given that copending 10/554,918 disclose monomer identical to that presently claimed, which includes those that are hydrophobic, it is clear that such monomer would inherently be incorporated into the hydrophobic block segment of the polymer.

With respect to difference (b), applicants' attention is drawn to MPEP 804 where it is disclosed that "the specification can always be used as a dictionary to learn the meaning of a term in a patent claim." *In re Boylan*, 392 F.2d 1017, 157 USPQ 370 (CCPA 1968). Further, those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent. (underlining added by examiner for emphasis) *In re Vogel*, 422 F.2d 438, 164 USPQ 619,622 (CCPA 1970).

Consistent with the above underlined portion of the MPEP citation, attention is drawn to page 16, lines 11-14 of copending 10/554,918 that discloses that the solvent is in fact water.

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use water as solvent and to use block copolymer obtained from specific polyvinyl ether in copending 10/554,918 in order to produce ink excellent in image fastness, coloring ability, dispersion stability, and storage stability, and thereby arrive at the claimed invention from the copending one.

With respect to difference (c), while copending 10/554,918 discloses composition as presently claimed, there is no disclosure of that the composition is a toner composition as required in present claim 8.

However, while there is no disclosure that the composition is a toner composition as presently claimed, applicants attention is drawn to MPEP 2111.02 which states that "if the body of a claim fully and intrinsically sets forth all the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention's limitations, then the preamble is not

considered a limitation and is of no significance to claim construction". Further, MPEP 2111.02 states that statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the purpose or intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

It is the examiner's position that the preamble does not state any distinct definition of any of the claimed invention's limitations and further that the purpose or intended use, i.e. toner, recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art invention and further that the prior art structure which is a composition identical to that set forth in the present claims is capable of performing the recited purpose or intended use. Thus, one of ordinary skill in the art would arrive at the claimed invention from the copending one.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

8. Claims 1-3, 5, and 7-11 are directed to an invention not patentably distinct from claims 1, 2, and 12 of commonly assigned 10/554,918. Specifically, although the conflicting claims are not identical, they are not patentably distinct for the reasons set forth in paragraph 7 above.

9. The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300).

Commonly assigned 10/554,918, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

10. Claims 1, 3, 5, 7-9, and 11 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 4, 9, and 14 of copending Application No. 10/517,865. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following explanation.

Copending 10/517,865 discloses composition comprising block polymer encapsulating functional material and solvent wherein at least one of the block segments has vinyl ether structure of the formula $-(CH_2-CH-)$ where R_1 is $(CH(R^2)-CH(R^3)-O)-R^4$ wherein R^4 is phenyl (Ph) and R^2 and R^3 are each hydrogen or methyl group. There is also disclosed image forming method to form image on substrate.

The difference between copending 10/517,865 and the present claimed invention is the requirement in the claims of (a) specific solvent, (b) specific functional material, (c) amphipathic block polymer, and (d) toner.

With respect to differences (a) and (b), while copending 10/517,865 discloses the use of solvent and functional material, there is no explicit disclosure that the solvent is water or that the functional material is a colorant.

Applicants' attention is drawn to MPEP 804 where it is disclosed that "the specification can always be used as a dictionary to learn the meaning of a term in a patent claim." *In re Boylan*, 392 F.2d 1017, 157 USPQ 370 (CCPA 1968). Further, those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent. (underlining added by examiner for emphasis) *In re Vogel*, 422 F.2d 438, 164 USPQ 619,622 (CCPA 1970).

Consistent with the above underlined portion of the MPEP citation, attention is drawn to page 28, lines 10-16 of copending 10/517,865 which discloses that the solvent is in fact water or aqueous solvent and to page 29, lines 9-13 and page 39, lines 4-9 that discloses that the encapsulated material, i.e. functional material, is in fact a colorant.

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use water as the solvent and a colorant as the functional material in copending 10/517,865 and thereby arrive at the present invention from the copending one.

With respect to difference (c), applicants' attention is drawn to MPEP 804 where it is disclosed that "the specification can always be used as a dictionary to learn the meaning of a

term in a patent claim.” *In re Boylan*, 392 F.2d 1017, 157 USPQ 370 (CCPA 1968). Further, those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent. (underlining added by examiner for emphasis) *In re Vogel*, 422 F.2d 438, 164 USPQ 619,622 (CCPA 1970).

Consistent with the above underlined portion of the MPEP citation, attention is drawn to page 8, line 27-page 9, line 6 of copending 10/517,865 that discloses that the block copolymer is an amphipathic block polymer comprising hydrophobic segment and to page 3, lines 2-5 that discloses that the motivation for using such block polymer is to alleviate bleeding and feather and produce ink excellent in fixation.

Although there is no explicit disclosure that the vinyl ether described above is in the hydrophobic block segment of the polymer as required in the present claims, on the one hand, however, given that copending 10/517,865 disclose monomer identical to that presently claimed and block polymer comprising hydrophobic block as presently claimed, it is clear that the monomer would inherently also be part of the hydrophobic segment of the polymer as presently claimed. On the other hand, given that copending 10/517,865 disclose monomer identical to that presently claimed, which includes those that are hydrophobic, it is clear that such monomer would inherently be incorporated into the hydrophobic block segment of the polymer.

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use amphipathic block polymer in copending 10/517,865 in order to alleviate bleeding and feather and produce ink excellent in fixation, and thereby arrive at the present invention from the copending one.

With respect to difference (d), while copending 10/517,865 discloses composition as presently claimed, there is no disclosure of that the composition is a toner composition as required in present claim 8.

However, while there is no disclosure that the composition is a toner composition as presently claimed, applicants attention is drawn to MPEP 2111.02 which states that "if the body of a claim fully and intrinsically sets forth all the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention's limitations, then the preamble is not considered a limitation and is of no significance to claim construction". Further, MPEP 2111.02 states that statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the purpose or intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

It is the examiner's position that the preamble does not state any distinct definition of any of the claimed invention's limitations and further that the purpose or intended use, i.e. toner, recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art invention and further that the prior art structure which is a composition identical to that set forth in the present claims is capable of performing the recited purpose or intended use.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

11. Claims 1,3, 5, 709, and 11 are directed to an invention not patentably distinct from claims 1, 2, and 12 of commonly assigned 10/517,865. Specifically, although the conflicting claims are not identical, they are not patentably distinct for the reasons set forth in paragraph 10 above.

12. The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300). Commonly assigned 10/517,865, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

Claim Objections

13. Claim 1 is objected to because of the following informalities: in line 5 “amphipatic” should read “amphipathic”.

14. Claims 3 and 5 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 3, which depends on claim 1, recites “the polymer compound is amphipathic” while claim 1 recites “the polymer compound being an amphipathic block polymer compound”. Additionally, claim 5, which depends on claim 1, recites “monomer unit of the general formula (1) is incorporated in a hydrophobic block segment of the polymer compound” while claim 1 recites that the polymer compound includes “hydrophobic block segment having a monomer unit represented by general formula (1)”. Thus, claim 3 and claim 5 each fail to further limit the scope of the claim on which each depends, namely, claim 1, given that claim 3 and claim 5 each recite limitation already disclosed in claim 1.

Claim Rejections - 35 USC § 112

15. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

16. Claims 1-3, 5, and 7-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, lines 5-6 recites “the polymer compound being an amphipathic block polymer compound” while line 17 recites “wherein the polymer compound is a block polymer”. Thus, the scope of claim 1 is confusing given that there are two different recitations in claim 1 regarding the polymer compound and thus, it is not clear what the polymer compound actually encompasses. In light of the amendment to lines 5-6 of the claim, should the recitation in line 17 of the claim be deleted as redundant?

Claim Rejections - 35 USC § 102

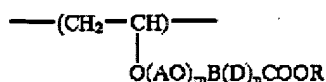
17. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

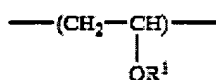
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

18. Claims 1-3, 5, and 7-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Sato et al. ‘539 (U.S. 7,157,539).

Sato et al. ‘539 disclose dispersible composition including ink or toner comprising aqueous medium, functional substance, i.e. colorant, and amphipathic block polymer comprising monomer of the formula:



and monomer of the formula:



where A is straight chain or branched alkylene group having 1-15 carbon atoms, m is 0-30, B is single bond or alkylene, D is aromatic group, n is 1-10, R is hydrogen or alkyl group, and M is mono- or poly-valent cation and wherein R¹ is (CH(R²)-CH(R³)-O)_p-R⁴ wherein R⁴ is phenyl that is unsubstituted or substituted with C₁-C₄ alkyl group, R² and R³ are each hydrogen, and p is 1-18. The block polymer contains both hydrophobic and hydrophilic blocks. It is further disclosed that the colorant is encapsulated by the block polymer. There is also disclosed image forming method comprising applying the ink to substrate to form image (col.1, lines 11-21, col.2, lines 1-4, 12-31, and 62-67, col.11, line 58-col.12, line 3, col.12, lines 20-35, col.13, lines 30-37 and 41-46, col.13, line 65-col.14, line 2, col.16, lines 46-57, col.17, lines 31-41, col.18, lines 15-34, col.28, lines 53-63, col.29, line 52-col.30, line 15, and col.31, lines 41-50 and 63-67).

While there is no explicit disclosure in Sato et al. '539 that the monomer is in the hydrophobic block segment of the polymer as required in the present claims, on the one hand, however, given that Sato et al. '539 disclose monomer identical to that presently claimed and block polymer comprising hydrophobic block and hydrophilic block as presently claimed, it is clear that the monomer would inherently also be part of the hydrophobic segment of the polymer

as presently claimed. On the other hand, given that Sato et al. '539 disclose monomer identical to that presently claimed, which includes those that are hydrophobic, it is clear that such monomer would inherently be incorporated into the hydrophobic block segment of the polymer.

In light of the above, it is clear that Sato et al. '539 anticipate the present claims.

19. Claims 1, 3, and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Forster et al. (U.S. 6,491,903).

Forster et al. disclose dispersible composition comprising aqueous medium, functional substance, i.e. pharmaceutical compound, and amphiphilic block polymer including hydrophobic segment obtained from poly(benzyl vinyl ether) which is obtained from monomer unit identical to that of general formula (1) when m is 0, n is 1, B is alkylene group, and D is unsubstituted aromatic ring. It is disclosed that the functional substance is encapsulated in the block polymer (col.1, lines 19-21, col.3, lines 31-39, col.8, lines 35-36, col.9, lines 1-5 and 30-32, col.16, lines 30-36, col.41, line 47, col.58, lines 40-48, col.59, lines 6-8, col.664, lines 21-22, and col.66, lines 50-55).

In light of the above, it is clear that Forster et al. anticipate the present claims.

Response to Arguments

20. Applicants' arguments regarding Sato et al. '904 (U.S. 2003/0232904) have been considered but they are moot in view of the discontinuation of the use of this reference against the present claims.

21. Applicants' arguments have been fully considered but, with the exception of arguments relating to Sato et al. '904, they are not persuasive.

Specifically, applicants argue that Sato et al. '539 (previously Sato et al. '343) is not a relevant reference against the present claims given that while Sato et al. '539 disclose block polymer comprising hydrophobic block and hydrophilic block that is obtained from monomer of presently claimed formula (1), there is no explicit disclosure in Sato et al. '539 that the monomer is in the hydrophobic block segment of the polymer as required in the present claims.

On the one hand, however, given that Sato et al. '539 disclose monomer identical to that presently claimed and block polymer comprising hydrophobic block and hydrophilic block as presently claimed, it is clear that the monomer would inherently also be part of the hydrophobic segment of the polymer as presently claimed.

On the other hand, given that Sato et al. '539 disclose monomer identical to that presently claimed, which includes those that are hydrophobic, it is clear that such monomer would inherently be incorporated into the hydrophobic block segment of the polymer.

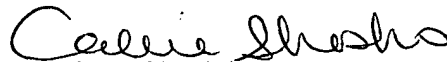
In light of the above, it is the examiner's position that Sato et al. '539 remains a relevant reference against the present claims.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
2/20/07